Saskatchewan
Parks and
Renewable
Resources

The 1990 Saskatchewan Elk Transplant Program

Wildlife Technical Report 90-1

THE 1990

SASKATCHEWAN

ELK TRANSPLANT PROGRAM

A Co-operative Project

by

THE ROCKY MOUNTAIN ELK FOUNDATION
Missoula, Montana

CANADIAN PARKS SERVICE
Elk Island National Park, Alberta

SASKATCHEWAN PARKS AND RENEWABLE RESOURCES
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Prepared By:

D. Brewster, Wildlife Biologist
Saskatchewan Parks and Renewable Resources
Wildlife Branch, 3211 Albert Street
Regina, Saskatchewan
S4S 5W6

92-03055/

ABSTRACT

In March 1990, 59 elk were relocated from Elk Island National Park, Alberta to the Helene Lake area in the Divide Provincial Forest, 32 km northeast of Glaslyn, in western Saskatchewan. The elk were transported to Saskatchewan by truck and kept in a holding facility at the release site for 6 days. The animals were released into adjacent forest habitat on March 18, 1990, late in the day and with a minimum of disturbance. Based on aerial and ground observations, the elk appeared to adjust quickly to their new habitat and remained in the general vicinity of the release location. The transplant was part of a provincial program, designed to re-establish elk in unused forest habitat and supplement small existing elk herds to achieve more rapid population growth for sport hunting purposes.

ACKNOWLEDGEMENTS

The Rocky Mountain Elk Foundation, a non-government wildlife organization dedicated to the conservation and management of the North American elk resource, provided major funding for the 1990 transplant program. Their continued interest and financial support towards propagation of Saskatchewan's elk population is sincerely appreciated.

A special acknowledgement is extended to the Canadian Parks Service (Environment Canada) for providing the animals for the transplant program. Mr. Peter Dearing and other Elk Island National Park staff spent considerable time and effort to trap and process the animals for shipment to Saskatchewan.

Messrs Terry Rock, Phil Haughian, Randy Sequin, Arnie Schmidt, Scott Harvey and other Saskatchewan Parks and Renewable Resources staff from the Meadow Lake Region participated in the processing, transport, release and monitoring of the animals. Arnie Schmidt provided the monitoring information used in this report.

A special thanks to members of the Northern Lakes Wildlife Federation, located at Glaslyn, for providing volunteer labour and materials for the transplant program. Members constructed the holding facility and assisted with unloading, feeding and monitoring the elk. Their continued support and involvement in co-operative projects of this nature is appreciated.

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1. INTRODUCTION

Since 1982, 273 elk (Cervus elaphus) have been trapped at Elk Island National Park (EINP), Alberta and relocated in Saskatchewan, as part of a provincial wild release program. The program is intended to re-establish elk in historical range, increase populations in under-utilized habitat and restock populations depleted by hunting.

The elk have been released, following a short holding period, in a variety of forest and parkland habitats, including the Thickwood Hills (south of Spiritwood), Nipawin Provincial Park (northeast of Prince Albert), Bronson Provincial Forest (southwest of Loon Lake) and Helene Lake in the Divide Provincial Forest (northeast of Glaslyn) (Figure 1). These transplant programs have assisted population recovery and some herds have increased sufficiently to support limited sport hunting pressure.

In March 1990, Saskatchewan Parks and Renewable Resources (SPRR), with the co-operation of the Canadian Parks Service (CPS) and financial assistance from the Rocky Mountain Elk Foundation (RMEF), relocated another 59 elk from EINP to the Helene Lake site in the Divide Provincial Forest, 32 km northeast of Glaslyn in western Saskatchewan (Figure 2). Seventy elk were released at the Helene Lake site in March 1989 in an effort to establish a resident elk population in previously unoccupied forest habitat (Brewster, 1989).

This report documents the procedures used to transport and release the animals and reports on the success of the 1990 program.

2. CAPTURE AND PROCESSING

The elk were captured and processed, according to methods described by Brewster (1989) at EINP, 260 km² of forest habitat located 35 km west of Edmonton, Alberta. The trapping operation is conducted annually by the CPS in an effort to control growth of their resident elk population and assist other wildlife agencies in establishing wild elk herds.

The animals were tested for brucellosis and tuberculosis and injected with ivermectin (Ivomec) to control internal parasites. An experimental flukicide (triclabendozole), developed to control infection by the giant liver fluke (Fascioloides magna), was also administered to prevent transmission to native ungulate populations near the release site. Although the liver fluke has been reported in moose and elk herds at most elk release sites in Saskatchewan (Wobeser et al. 1985), the treatment was a precaution against further parasite transmission by the transplanted elk. An analysis of 20 randomly selected fecal samples, from the elk holding facility at Helene Lake, contained no fluke eggs and suggested that the transplanted elk were free of the trematode.

Figure 2: Location of the Helene Lake elk transplant, March 1990

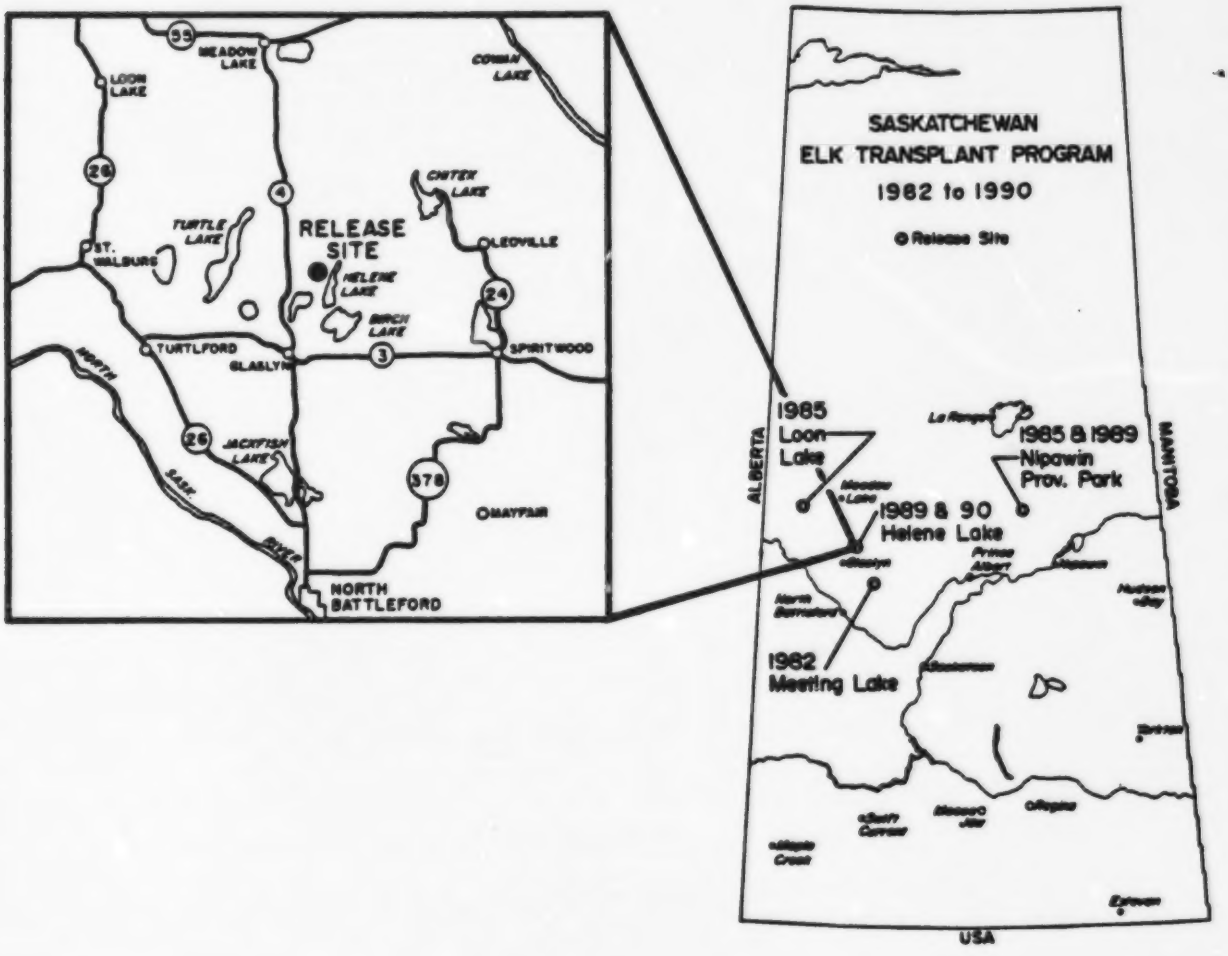

Figure 1: Elk transplant locations in Saskatchewan, 1982 to 1990

Each animal was fitted with a blue "alflex" numbered eartag and color coded collars, with either yellow identification symbols on a blue background or blue identification symbols on a yellow background, were attached to 20 adult females (Appendix 1). The collars and eartags were designed to assist visual observation of the animals from the air and to identify individual animals subjected to mortality from hunting or natural causes.

3. TRANSPORT AND RELEASE

The 59 elk (9 spike bulls, 11 adult bulls, 23 cows and 16 calves) were transported from EINP in a double compartment cattle liner, to a holding facility in Sec. 12-Twp. 53-Rge. 16-W. 3rd Mer., near the west side of Helene Lake, during a 4 hour mid-day period on March 13, 1990. The floor of the truck was covered with hay to minimize injury and discomfort to the animals. An export permit (#18079R) was obtained from Alberta Energy and Natural Resources, Fish and Wildlife Division, Edmonton, prior to shipment.

The elk were unloaded, directly from the back of the truck, into a "L" shaped holding facility, designed to calm the animals following shipment and acclimatize them to their new surroundings prior to release in the adjacent forest habitat. The holding facility was constructed with 3 m walls, from locally available slab lumber, in a mature spruce (**Picea glauca**) and aspen poplar (**Populus tremuloides**) stand. Some of the animals were reluctant to exit the truck and the unloading procedure took approximately 1.5 hours. However, with the exception of some scrapes and cuts, all animals were in good physical condition.

Water was supplied daily through a propane-heated water trough and field pea round bales, hauled into the centre of the holding facility prior to unloading the elk, provided an adequate food source. Field pea and alfalfa bales were also distributed near the holding facility and in Sec. 26-Twp. 52-Rge. 16-W. 3rd Mer., after the elk were released, to supplement their food supply until spring.

The gate to the holding facility was opened late in the evening on March 18, 1990, after a 6 day holding period. The animals exited slowly in small groups and proceeded northeast along a bush trail into adjacent forest habitat. Tracks were observed at the release site the following day, indicating that some of the animals had returned to feed on the hay bales that remained inside the holding facility.

Small numbers of elk were also observed during several aerial reconnaissance flights over the area with a Cessna 185 aircraft and 2 observers. On March 19, 6 elk were observed 1.6 km directly west of the holding facility. Another 2 groups of elk, consisting of 5 (1 with a blue collar) and 2 animals, respectively, were observed 5 km northwest of the release site. On March 22, an additional 15 animals were located 2 km west of the release site. The animals remained in heavily wooded spruce stands and other than being identified as the released animals, could not be segregated according to sex or age class.

The elk continued to be sighted periodically until spring, 1990 by local wildlife federation members, residents of the area and SPRR staff. Groups of 1, 5 (3 cows, 1 yearling bull and 1 calf) and 6 elk were observed directly north of Midnight Lake, 8 to 10 km west of the release site. Another 4 elk, in two separate groups, were also reported 1 to 3 km south of Birch Lake, 19 km south of the release site. Three elk were observed 25 km west of the release site, near the east side of Turtle Lake, and based on field reports, appeared to be the maximum distance travelled by any of the transplanted animals.

The exact location of some of the released animals could not be established, but in the dense tree cover, characteristic of the Divide Forest, it is conceivable that some animals were present but simply could not be observed during air or ground surveys. Sightings have been sporadic since spring, but the information suggests that the elk have not dispersed from their late winter locations.

Mortality, associated with the transplant program, included one cow that broke her leg during processing at EINP. The animal was disposed of according to Park policy.

The Rocky Mountain Elk Foundation contributed $3582.15 towards the 1990 transplant program (Appendix 2). Aircraft monitoring, meals and accommodation, transport vehicles and miscellaneous expenses comprised 42%, 33%, 20% and 5% of this expenditure, respectively. The CPS provided the elk and all veterinary services, drugs, feed, staff and vehicles associated with the capture operation at EINP. The SPRR supplied staff to process the elk at EINP, transport the animals to Saskatchewan and monitor their distribution following release. The manpower, feed and miscellaneous expenses required to sustain the elk at the release site holding facility was provided by the Northern Lakes Wildlife Federation.

4. CONCLUSIONS

The Helene Lake transplant has successfully re-established a resident elk population in the Divide Provincial Forest in western Saskatchewan. The animals released at the Helene Lake site in 1989 (Brewster, 1989) and again in 1990, appear to have adapted to their new habitat and based on aerial survey information and field reports, continue to reside within a 50 km radius of the release site.

Calves were observed with cows released at the Helene Lake site in 1989 and with 1990 recruitment, elk populations in the area should continue to expand. Although a few animals from the 1989 release have been harvested by Indian hunters, sport hunting will be restricted until populations reach manageable levels. It is anticipated that a limited bulls-only harvest, designed to harvest the less productive segment of the population and promote herd growth, will be implemented in 1991 or 1992.

The continued expansion and long-term management of provincial elk populations to meet sport and Indian hunting demand remains a high priority for SPRR. A bulls-only season was implemented in the Bronson Provincial Forest in 1989 to take advantage of growing elk populations that were supplemented by the 1985 Loon Lake release. The Thickwood Hills transplanted elk herd has been subjected to an annual either-sex limited quota sport hunt since 1985 and continues to expand slowly. It is anticipated that transplanted elk populations near Nipawin Provincial Park will provide some bulls-only sport hunting opportunity in 1990, with the removal of a portion of the area from game preserve status.

The transplant program remains a cost efficient and feasible method of achieving a rapid increase in elk densities for sport hunting purposes. Future transplants are proposed for the Clark Lakes and Candle Lake area in central Saskatchewan in 1991 or 1992 depending on the availability of elk from EINP or the Cypress Hills in southwestern Saskatchewan.

5. REFERENCES

Brewster, D.A. 1989. Status of the 1989 Elk Transplant Program in Saskatchewan. Sask. Parks and Ren. Res., Wildl. Br., Wildl. Tech. Rpt. 89-2. 13 pp..

Wobeser, G., A.A. Gajadhar, and H.M. Hunt. 1985. Fascioloides magna: Occurrence in Saskatchewan and distribution in Canada. Can. Vet. J. 26:241-244.

Appendix 1: Animal identification codes for the Helene Lake elk transplant, March 1990.

EARTAG #	METAL TAG #	AGE/SEX	COLLAR COLOR/CONFIGURATION
1	8K59995	IM	-
-	8K59982	AM	-
2	8K59999	IM	-
3	8K29975	AM	-
4	8K59915	AM	-
5	8K59956	IF	-
6	8K59920	AM	-
7	W88078	IF	-
8	8K29958	AF	BLUE COLLAR/YELLOW 8
9	8K59918	IF	-
10	8K59912	YF	BLUE COLLAR/YELLOW 70
11	8K92923	YM	-
12	8K92970	AF	BLUE COLLAR/YELLOW 50
13	8K92984	IF	-
14	8K59969	YM	-
15	8K59983	IF	-
16	8K59924	IF	-
17	W88079	IM	-
18	8K59921	AM	-
19	8K59919	AF	BLUE COLLAR/YELLOW C
20	8K59995	AF	BLUE COLLAR/YELLOW g
21	8K59995	YM	-
22	8K59950	AF	BLUE COLLAR/YELLOW K
23	8K59986	IM	-
24	8K59925	AF	BLUE COLLAR/YELLOW 4
25	8K59977	AM	-
26	8K59998	AM	-
27	8K59954	IF	-
28	8K59988	AF	YELLOW COLLAR/BLUE "BOX"
29	8K59990	AM	-
30	8K59922	YF	YELLOW COLLAR/BLUE 5
31	W88070	YM	-
32	8K59994	AF	YELLOW COLLAR/BLUE X
33	8K59953	IM	-
35	8K59997	AM	-
37	8K59991	AF	YELLOW COLLAR/BLUE "MALE"
38	8K59911	AF	YELLOW COLLAR/BLUE "ARROW"
39	8K59971	AF	YELLOW COLLAR/BLUE "/"
40	8K59959	AF	YELLOW COLLAR/BLUE Y
41	8K59992	AF	YELLOW COLLAR/BLUE 10
42	8K59987	IM	-
43	W88080	AM	-
44	8K59980	AF	YELLOW COLLAR/BLUE "---"
45	-	AM	-
46	8K59972	AF	YELLOW COLLAR/BLUE "//"
47	8K59917	IM	-

Continue Appendix 1:

EARTAG #	METAL TAG #	AGE/SEX	COLLAR COLOR/CONFIGURATION
48	8K59913	IF	-
49	8K59985	YF	YELLOW COLLAR/BLUE "TRIANGLE"
50	8K59951	IM	-
51	8K59962	YM	-
53	8K59978	AF	YELLOW COLLAR/BLUE I
54	8K59961	YM	-
55	8K59970	AF	YELLOW COLLAR/BLUE "HALF MOON"
56	8K59993	YM	-
57	8K59963	AF	-
58	8K59914	AF	-
59	8K59960	YM	-
60	8K59957	AF	-
61	8K59976	YM	-

Note: Eartag #'s 34, 36 and 52 were not used.

Appendix 2: Statement of expenditures for the 1990 elk transplant program.

AGENCY	PRODUCT	SUPPLIER	COST $$
RMEF	AIRCRAFT	ATHABASKA AIRWAYS LTD.	$1520.00
RMEF	DISEASE	WESTERN COLL. VET. MEDICINE	$ 110.00
RMEF	TRANSPORT	PLACE CARRINGTON TRANSPORT	$ 700.00
RMEF	EARTAGS	ANIMAL HEALTH SUPPLIES	$ 84.45
RMEF	STAFF EXP.	SASK. PARKS & REN. RESOURCES	$1167.70
CPS	ALFALFA	CANADIAN PARKS SERVICE	$ -
CPS	ELK	CANADIAN PARKS SERVICE	$ -
SPRR	VEHICLES	SASK. PARKS & REN. RESOURCES	$ -
SPRR	STAFF	SASK. PARKS & REN. RESOURCES	$ -
NLWF	STAFF/HAY	NORTHERN LAKES WILDLIFE FED.	$ -
		TOTAL EXPENDITURE =	$3582.15

Agencies:

RMEF = Rocky Mountain Elk Foundation
CPS = Canadian Parks Service
SPRR = Saskatchewan Parks and Renewable Resources
NLWF = Northern Lakes Wildlife Federation